

WHAT IS CLAIMED IS:

1. 1. A method for communicating data to a router,
2 comprising the steps of:
 - 3 a) generating a constant rate data stream from the
4 data;
 - 5 b) providing, via a termination unit, the constant
6 rate data stream to the router; and
 - 7 c) assigning an address to the termination unit.
- 1 2. The method of claim 1, further comprising a step of:
 - 2 d) routing the constant rate data stream based on
3 destination information contained therein.
- 1 3. The method of claim 1, wherein the termination unit
2 is on a subscriber line module of a digital line unit of
3 a central office switch, the central office switch
4 including a switching network, and
5 wherein the step of providing the constant rate data
6 stream to the router is carried out such that the
7 constant rate data stream bypasses the switching network.
- 1 4. The method of claim 1, wherein the termination unit
2 is on a subscriber line module of a digital line unit of
3 a central office switch, the central office switch
4 including a switch interface module and a switching
5 network, and
6 wherein the step of providing the constant rate data
7 stream to the router is carried out such that the
8 constant rate data stream bypasses the switching network
9 and bypasses the switch interface module.
- 1 5. The method of claim 1, wherein the termination unit
2 is on a subscriber line module of a digital line unit of
3 a central office switch, the central office switch
4 including a switch interface module, and

5 wherein the step of providing the constant rate data
6 stream to the router is carried out such that the
7 constant rate data stream bypasses the switch interface
8 module.

1 6. The method of claim 1, wherein the termination unit
2 is on a remote line termination unit, the remote line
3 termination unit having a link to a central office, and
4 wherein the step of providing the constant rate data
5 stream to the router is carried out such that the
6 constant rate data stream bypasses the central office.

1 7. The method of claim 1, wherein the data is
2 encapsulated, and
3 wherein the step of generating a constant rate data
4 stream comprises the steps of
5 i) buffering the data, and
6 ii) clocking out the buffered data to achieve
7 the constant rate data stream.

1 8. The method of claim 7, wherein the constant rate of
2 the data stream is 64 Kbps.

1 9. The method of claim 7, wherein the constant rate of
2 the data stream is 128 Kbps.

1 10. The method of claim 1, wherein the step of
2 generating a constant rate data stream comprises the
3 steps of
4 i) if the data is not encapsulated, encapsulating
5 the data, to generate capsules of data,
6 ii) buffering the capsules of data, and
7 iii) clocking out the buffered frames of data to
8 achieve the constant rate data stream.

1 11. The method of claim 1, wherein the address assigned
2 to the termination unit is a temporary address.

1 12. The method of claim 11, wherein the step of
2 assigning an address to the termination unit comprises
3 the steps of

4 i) generating a table in which the temporary
5 address is associated with the termination unit, and
6 ii) storing the table.

1 13. The method of claim 11, wherein the termination unit
2 is coupled with an associated line unit interface at an
3 address assignment unit, and

4 wherein the line unit interface is assigned to the
5 address.

1 14. A device for communicating data from a first
2 location, via a central office having at least one
3 digital line unit, to a router at a second location,
4 comprising:

5 a) a data transceiver,
6 i) being located at the first location,
7 ii) accepting the data, and
8 iii) generating a constant rate data stream
9 from the data;
10 b) a first link,
11 i) being coupled with the data transceiver,
12 and
13 ii) carrying the constant rate data stream
14 generated by the data transceiver;
15 c) a line termination unit,
16 i) being located on the at least one digital
17 line unit, and
18 ii) terminating the first link;
19 d) a second link,
20 i) being coupled with the line termination
21 unit, and
22 ii) carrying the constant rate data stream;
23 and

24 e) an address assignment unit,
25 i) terminating the second link,
26 ii) assigning an address to the line
27 termination unit, and
28 iii) providing the constant rate data stream
29 to the router.

1 15. The device of claim 14, wherein the constant rate
2 data stream has a rate data of 64 Kpbs.

1 16. The device of claim 14, wherein the constant rate
2 data stream has a rate data of 128 Kpbs.

1 17. The device of claim 14, wherein the line termination
2 unit is a basic rate interface.

1 18. The device of claim 14, wherein the address
2 assignment unit comprises
3 i) a line termination unit interface for
4 terminating the second link,
5 ii) a storage device, storing a program,
6 iii) a processor for executing the program stored
7 in the storage device,
8 iv) a router interface for terminating a link to
9 the router, and
10 v) a bus system, shared by the line termination
11 unit interface, the processor, and the router
12 interface.

1 19. The device of claim 18, wherein the storage device
2 stores a look up table in which the line termination unit
3 is associated with the address assigned to the line
4 termination unit.

1 20. The device of claim 18, wherein the storage device
2 stores a look up table in which the line termination unit
3 interface is associated with the address assigned to the
4 line termination unit.

1 21. A device for communicating data from a first
2 location to a router, the first location having a remote
3 line termination unit, the remote line termination unit
4 coupled, via a link, with a central office, comprising:
5 a) a data transceiver,
6 i) being located at the first location,
7 ii) accepting the data, and
8 iii) generating a constant rate data stream
9 from the data;
10 b) a first link,
11 i) being coupled with the data transceiver,
12 and
13 ii) carrying the constant rate data stream
14 generated by the data transceiver;
15 c) a line termination node,
16 i) being located on the remote line
17 termination unit, and
18 ii) terminating the first link;
19 d) a second link,
20 i) being coupled with the line termination
21 node, and
22 ii) carrying the constant rate data stream;
23 and
24 e) an address assignment unit,
25 i) terminating the second link,
26 ii) assigning an address to the line
27 termination node, and
28 iii) providing the constant rate data stream
29 to the router.

1 22. The device of claim 21, wherein the constant rate
2 data stream has a rate data of 64 Kpbs.

1 23. The device of claim 21, wherein the constant rate
2 data stream has a rate data of 128 Kpbs.

1 24. The device of claim 21, wherein the address
2 assignment unit comprises

- 3 i) a line termination node interface for
4 terminating the second link,
- 5 ii) a storage device, storing a program,
- 6 iii) a processor for executing the program stored
7 in the storage device,
- 8 iv) a router interface for terminating a link to
9 the router, and
- 10 v) a bus system, shared by the line termination
11 node interface, the processor, and the router
12 interface.

1 25. The device of claim 24, wherein the storage device
2 stores a look up table in which the line termination node
3 is associated with the address assigned to the line
4 termination unit.

1 26. The device of claim 24, wherein the storage device
2 stores a look up table in which the line termination node
3 interface is associated with the address assigned to the
4 line termination node.

1 27. In a central office having
2 - a digital line unit having a subscriber line
3 module which terminates a number of local lines,
4 - a switch interface module coupled with the
5 digital line unit, and
6 - a switching network coupled with the switch
7 interface module,
8 a device for communicating to a router a constant rate
9 data stream, received on one of the local lines,
10 comprising:

11 a) a line termination unit,
12 i) being located on the digital line unit, and
13 ii) terminating one of the local lines;
14 b) a link,
15 i) being coupled with the line termination
16 unit, and
17 ii) carrying the constant rate data stream;
18 and
19 c) an address assignment unit,
20 i) terminating the link,
21 ii) assigning an address to the line
22 termination unit, and
23 iii) providing the constant rate data stream
24 to the router, wherein the constant rate data
25 stream bypasses the switching network.

1 28. The device of claim 27, wherein the line termination
2 unit is a basic rate interface.

1 29. The device of claim 27, wherein the address
2 assignment unit comprises

3 i) a line termination unit interface for
4 terminating the link,
5 ii) a storage device, storing a program,
6 iii) a processor for executing the program stored
7 in the storage device,
8 iv) a router interface for terminating a link to
9 the router, and
10 v) a bus system, shared by the line termination
11 unit interface, the processor, and the router
12 interface.

1 30. The device of claim 29, wherein the storage device
2 stores a look up table in which the line termination unit
3 is associated with the address assigned to the line
4 termination unit.

1 31. The device of claim 29, wherein the storage device
2 stores a look up table in which the line termination unit
3 interface is associated with the address assigned to the
4 line termination unit.

Address
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